

1951

First EIS class
23 officers
22 physicians
1 sanitary engineer

The two simple leather soles exemplify the phrase “shoe-leather epidemiology,” a term Alex Langmuir used frequently. The term was defined as the practice of personally investigating disease outbreaks at the local population level, and not relying on the reports of others.

Because Alex Langmuir stressed shoe leather epidemiology, the term became closely associated with the Epidemic Intelligence Service. During the first year, one of the officers created a logo featuring the sole of a shoe with a prominent hole worn through the bottom, superimposed over the Earth. This logo has continued to be the symbol of the EIS.



1952

17 officers

Alex Langmuir and the CDC/USPHS were contracted to conduct a “National Program for the Evaluation of Gamma Globulin for the Prevention of Poliomyelitis” during the last half of 1953. This necessitated intensive training of EIS officers near Pittsburgh that early summer in “muscle testing” – to enable us to measure the extent of paralysis of polio patients, some of whom had received gamma globulin before the onset of their polio. The program required that EIS officers, distributed across the US, visit every “multiple case household” to gather case histories, diagnostic specimens, and do muscle testing to assess the extent of neurologic damage, initially and 60 days later. My responsibility was for all such multiple case households in the state of Ohio. This work necessitated extensive travel throughout Ohio – to patient homes and regional hospital centers where severe cases with bulbar paralytic disease were gathered for respirator (iron lung) assistance for breathing – at Cleveland City Hospital, Maumee Valley Hospital in Toledo, Cincinnati Children’s Hospital, etc.



By 1953, poliomyelitis was generally considered to be the most urgent disease problem in the nation, as mothers and fathers and the entire nation waited with great anxiety and impatience for the advent of an

effective preventive agent. Dr. Jonas Salk, with financial assistance from the National Foundation for Infantile Paralysis (NFIP), was progressing with the invention and production of a killed-virus vaccine, which became available for field testing the following year.

But in 1953, despite lack of clear evidence of the efficacy of immune globulin, physicians and communities were intensely competing for the limited supplies of immune globulin distributed by the State Health Departments. I recall an intense outbreak of polio in Miami County (Dayton), where the people panicked and vociferously demanded the bulk of Ohio's entire supply of immune globulin. What a difficult time I had persuading them that its efficacy for prevention of polio was unknown, and that the state could not in fairness give them all they wanted. Their "panic in the streets" was very similar to that I encountered years later during a smallpox epidemic in Yorkshire, England. Altogether, the summer of 1953 was an active, challenging time for the Epidemic Intelligence Service. The EIS/CDC study of "Gamma Globulin for the Prevention of Poliomyelitis" did not reveal definitive utility, but it did help to "buy some time" until effective Salk polio vaccine became available for field testing in 1954.

The "inspiration" for the topic chosen was likely the rather bitter realization that after all the "muscle testing" training, extensive field work visiting multiple case households and hospitals, doing extensive muscle testing of cases, and extensive related communications, the results indicated that gamma globulin was ineffective for the prevention of poliomyelitis. A bust!

Submitted by Reimert T. Ravenholt, MD (EIS '52)

1953 – NO GIFT

11 officers

First veterinarian

The EIS conference was cancelled in 1955 so that an investigation of contaminated polio vaccine could be conducted. Later known as the Cutter incident, this investigation put CDC and EIS in the national spotlight for the first time.

1954

32 officers

First nurse

First woman officer

First Asian officer

Our class project relates to the Cutter polio vaccine problem of April 1955. One or several batches of killed (Salk) polio vaccine produced by the Cutter Pharmaceutical Company was found to contain some live polio virus that had not been killed by their manufacturing process that included the use of formaldehyde to kill the virus. It was a major public health problem, and Dr. Langmuir reacted rapidly and with authority. The killed vaccine had been field tested in a program that was initiated in



1954 under the direction of Dr. Tommy Francis at the University of Michigan School of Public Health. The results of the field trial were announced in April of 1955, and the countrywide program to vaccinate children with the polio vaccine began within two weeks. The vaccine was produced by several different pharmaceutical companies. Within several weeks, a number of cases of polio were reported in children who had been vaccinated. This occurred just before the EIS conference for 1955, which was immediately cancelled. The majority of EIS officers became involved in investigating all cases of polio reported since the vaccination program was initiated. The investigations revealed that some vaccine produced by the Cutter Company did contain live virus. Obviously, the field investigations were very important in showing that only some vaccine from one company was contaminated with live virus. Thus, the national vaccination program could be restarted using vaccine produced by the other companies.

Our class decided that this event was the major event of our two years, and we prepared this plaque- a "Do it yourself polio vaccine kit." The vaccine bottle was an actual polio vaccine bottle. The kit invites you to pour the vaccine into the metal cup and add formaldehyde to the level noted on the cup as to what magnitude of killed vaccine you want to attain, "Dead, Deader or Deadeast." You could then pull the "killed" vaccine into the syringe for use.

The esprit de corps within the EIS and importance of the class gift tradition are apparent in this class gift. While the whole class was deeply involved in the Cutter polio vaccine incident, the task of envisioning and assembling the plaque was delegated to another EIS officer who considered it "an honor to have been selected by his classmates to create and assemble the class plaque," * even though he was in the class of 1955.

Submitted by Philip Brachman (EIS '54)

*Submitted by Norm Petersen (EIS '55)

1955

37 officers

The symbolism on the plaque is quite straight forward: the irony of the Science of Epidemiology is the subject. The Pasteur quote "Dans les Champs d'Observation, l'Hasard Favorise l'Esprit Prépare" (In the field of observation, chance favors the prepared mind) is well-known and not infrequently referred to in the English. How much of epidemiology is science and how much is chance are suggested by the symbols of chance, which are represented by the crystal ball, a rabbit's foot, and the dice. The meaning of the two small whiskey bottles at the bottom is less obvious. At that time, Alex Langmuir would frequently propose that whoever was wrong on a contentious issue would buy a bottle of whiskey to be consumed together with the winner of the wager. I don't actually recall the wager ever actually being paid off, but the stated wager would come up perhaps a half a dozen times in a year.



Submitted by D. A. Henderson (EIS '55)

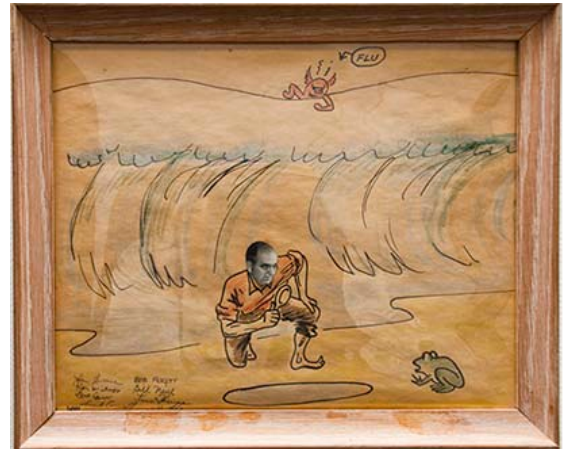
1956

17 officers

First dentist

First Hispanic officer

A possible explanation of the wave was the 1957 influenza epidemic of Asian flu. It came early that year to the U.S., in July and August. The flu was one of Alex's favorite subjects, and he was always willing to bet a bottle of good scotch on what will happen next. He had been quoted in the newspapers of the day that flu this year would come early, and there will be "no second wave." In fact, the flu came in the fall as usual, and it was twice as big as the summer wave. If you look at the EIS certificates, you see Alex Langmuir about to be engulfed in the second wave.*



The 1956 class was caught up in the polio epidemic, and Dr. Alex Langmuir sent us out to investigate polio-like outbreaks. It was a very scary time for everyone. I and two other members of our class were sent out from Atlanta to the CDC field station in Kansas City to respond to reported outbreaks of polio-like diseases. One such outbreak was in Mason City, Iowa. Our team was headed up by Dr. Tom Chin, and the laboratory in the field station was our backup. After examining numerous cases and processing many lab specimens, we concluded that we had experienced a coxsackie-B5 outbreak. The fact that we didn't find any cases of permanent paralysis was a great relief to the community. I went on to Arizona to investigate an outbreak of a cluster of acute upper respiratory illnesses of viral origin.

When time permitted, we participated in a study of histoplasmosis, conducted by Dr. Leo Furcalo. He was concerned that some patients in TB hospitals might have been incorrectly placed there because they had histoplasmosis instead of TB. We found that to be true.

While I was at the Kansas City Field station, I also was given responsibility for surveillance of equine encephalitis cases in six Midwestern states. I continued that function when I returned to Atlanta.

Submitted by John Greene (EIS '56)

* Submitted by Lyle Conrad (EIS '65)

1957

21 officers

According to classmates Malcolm Page and Paul Leaverton, assigned to CDC in Atlanta, and W. Paul Glezen, assigned to the North Carolina State Health Department, this gift reflects the first major international epidemic aid response undertaken by an EIS team-- the trip to East Pakistan (now Bangladesh) for the smallpox epidemic. Originally, the State Department was not sure about offering help until it heard that the Soviets were sending a team of scientists. Alex was proud of the effort. In his opinion, the EIS team that had spread out to villages to deliver vaccine had a greater benefit than the USSR entourage that arrived in two large cargo planes with a lot of



elaborate laboratory equipment, etc. In other words, the EIS team represented real "shoe-leather" epidemiology. The plaque was a good comment on the endeavor. The octopus symbolizes the extension of CDC "surveillance" worldwide.

Submitted by W. Paul Glezen (EIS '57)

1958

17 officers

Alex Langmuir was always a big thinker and required his EIS officers to think just as big.

This class plaque is a tongue and cheek reference to Alex's "big thinking". Epidemiological surveillance at the time was directed to the state and local public health departments, Alex wanted to expand surveillance to include international programs. May of 1958 saw the launch of Sputnik, the first man-made satellite to orbit the earth, and so many people started to think about other worlds. The class made this plaque with the future of epidemiology and space in mind, to expand surveillance into space using Epi satellites. The satellite in the upper left of the plaque is suitably named X-ADL, in honor of Alex Duncan Langmuir. It was of the opinion of the class that Alex's epidemiological surveillance should not just be confined to the local and state health departments but to the whole planet Earth and perhaps beyond. It turned out actually that over the next decade CDC was involved in "orbital" surveillance during the first moonshot. There is a small inscription on the bottom of the plaque that refers to Alex's ambitions to take the EIS program internationally-and possibly into orbit as the inscription reads;



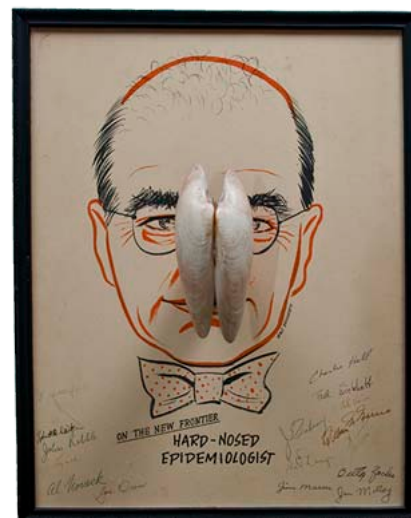
The last decade went round and round,
how difficult to absorb it.
But as the next decades goes by,
may you always be in orbit.

Submitted by Andy Nahmias (EIS '58)

1959

24 officers

In February 1961, Jim Mason was sent to Pascagoula, Mississippi in response to a request for assistance in investigating an apparent outbreak of infectious hepatitis (now hepatitis A). In very short order--11 days, he established that it was due to the ingestion of raw oysters that had been harvested from sewage-contaminated waters at the



mouth of the Pascagoula River. Jim reported on this outbreak at the 1961 EIS Conference. Shortly after the Pascagoula outbreak, an increased incidence of hepatitis was noted in the New York/New Jersey area; this was eventually traced to the ingestion of raw clams in sewage-contaminated waters in Raritan Bay, New Jersey. These two outbreaks initiated the era of shellfish-associated hepatitis; hence, the clam on Alex's nose.

A little further history is in order: the first shellfish-associated hepatitis outbreak had been reported from Sweden in 1956, and was traced to oysters. The Pascagoula outbreak was the first reported from the United States. After this outbreak had been recognized, the Hepatitis Surveillance Unit looked at the distribution of infectious hepatitis cases, and identified clusters of adult male cases in New York, New Jersey, and Pennsylvania. Upon investigation, many of these cases had a history of eating raw shellfish, which had been harvested from certain parts of Raritan Bay. Jim Mason spent some time in New York City after the EIS conference checking harvesting and shipping data on clams in the Fulton Fish Market. Only a small fraction of the total harvest came from polluted areas, and was capable of transmitting hepatitis. Jim feels that such shellfish-associated hepatitis had probably been occurring for years, but the transmission mode had simply not been identified until 1961.

“Hard-Nosed Epidemiologist” was a term Alex used frequently (though not nearly as often as “shoe-leather epidemiology”), probably referring to the determination required of EIS officers to dig deeply for data, often by learning how to get around various administrative roadblocks placed in the way.

“On the New Frontier” was a term of uncertain origin; we think it may refer in some way to the new JFK administration, which had recently come to power in Washington.

Submitted by Ted Eickhoff, Bill Marine, Jim Mason and Leo Morris (EIS '59)